



The future of Korean rheumatology

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Precisely predicting the future is challenging. However, by reflecting on past achievements and the current status of the Korean College of Rheumatology (KCR), we can project future trends and suggest developmental strategies for Korean rheumatology. This letter aims to provide insight into historical milestones, present accomplishments, and potential future directions in the field of rheumatology in Korea.

In 1979, 21 pioneers, primarily orthopedic professors, recognized the need for a professional association for rheumatology and held a founding meeting to establish such a society [1,2]. In 1980, the association was named the Korean Rheumatism Association and its bylaws were established. In 1981, the inaugural general meeting of the Korean Rheumatism Association was held along with a commemorative academic conference, marking 1981 as the founding year. In 1992, the Rheumatology Subspecialty Certification System was implemented, and in 1994, the Korean Rheumatism Association launched its official journal, "The Journal of the Korean Rheumatism Association." In 2010, the association changed its English name to the KCR and renamed the journal to "The Journal of Rheumatic Diseases." Continuing its development, KCR initiated its annual meeting and international symposium in 2017, and since 2019, both events have been held annually. Over the years, participation from both domestic and international attendees has grown significantly, with 154 domestic and 341 international participants in 2024, underscoring KCR's expanding global influence and prominence. In 2023, KCR further solidified its commitment to advancing rheumatology by establishing a mission to address rheumatic diseases and enhance public health, with a vision to

lead globally in improving treatment quality and creating an optimal medical environment.

Thus, the achievements of the KCR can be seen as the accomplishments of Korean rheumatology. However, few systematic studies have evaluated the academic achievements of the KCR and Korean rheumatologists. Therefore, this letter aims to assess the accomplishments of the KCR both quantitatively and qualitatively to evaluate the progress of Korean rheumatology.

First, we discuss the quantitative growth of the KCR. Starting with six rheumatology specialists in 1980, membership remained minimal throughout the 1980s (Figure 1A). However, with the implementation of the Rheumatology Subspecialty Certification System in 1992, membership has increased rapidly, is continuing to grow steadily, and is expected to surpass 1,000. This growth rate and the current number of members demonstrate the overall development of the KCR.

From 1992 to 1996, specialists were recognized by the association without formal examination. However, with the establishment of the examination system in 1997, the number of specialists has increased annually; currently, 434 rheumatology subspecialists are registered (Figure 1B), comprising approximately half of the total membership. Although the number of rheumatology subspecialists continues to increase, the notable recent decrease in the number of internal medicine residents specializing in rheumatology has cast a shadow on the supply of rheumatology subspecialists.

Furthermore, Korea has a very low proportion of rheumatology subspecialists (0.84 per 100,000 people) compared to other developed countries [3]. A study investigating the Korean

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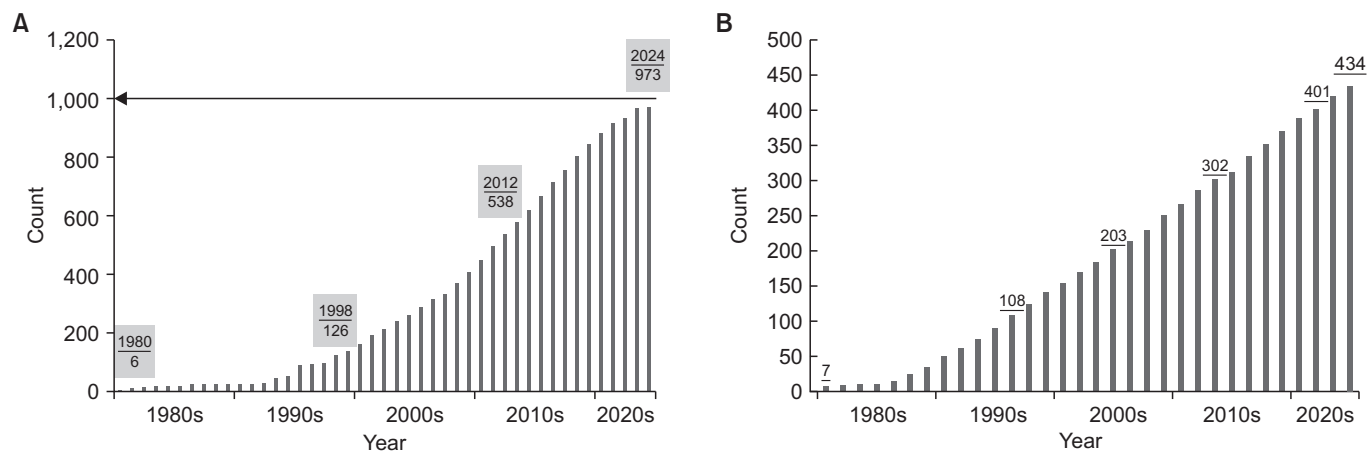


Figure 1. Cumulative growth of rheumatology members and specialists (1980~2024). Cumulative distribution of the number of the (A) Korean College of Rheumatology members and (B) rheumatology specialists.

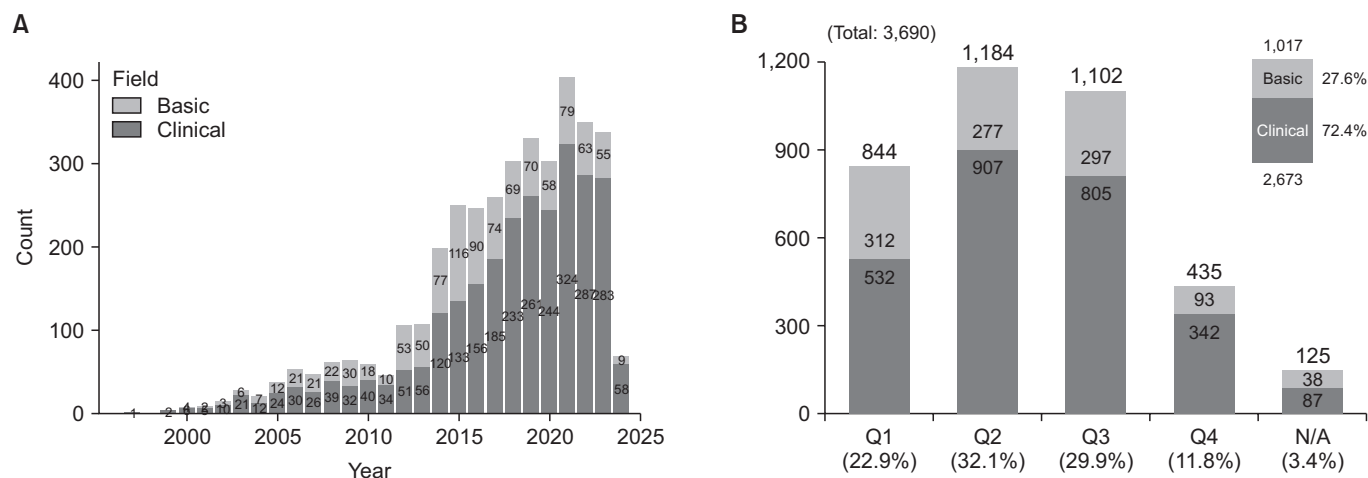


Figure 2. Cumulative number of papers by field and impact factor classification (2000~2025). (A) Cumulative number of papers by year and (B) classification by impact factor. Q: quartile, N/A: not available.

rheumatology workforce from 1992 to 2015 showed that while the number of doctors per 100,000 people was not significantly different from that in other major countries, the number of rheumatologists was notably lower [4]. Additionally, their geographic distribution is highly imbalanced according to population density. Recently, the association initiated a policy study on the appropriate number of rheumatology subspecialists; the results of this study should be closely observed.

In terms of academic growth, from 2005 to 2014, 928 abstracts (all domestic) were submitted to KCR academic conferences [5]. Overall, >50% of submitted abstracts were published as full-length articles. In general, non-English-speaking countries have a much lower rate of abstract-to-publication conversion than English-speaking countries. Therefore, this 50% rate is

very high compared with other non-English-speaking countries' associations.

To evaluate the quantity and quality of papers published by Korean rheumatologists, we used the PubMed advanced search builder with the query “rheumatology”[affiliation] AND “Korea”[affiliation]. A total of 4,196 papers were retrieved from 1997 to 2024. We excluded papers without Korean authors, resulting in a final selection of 3,690 papers. Due to difficulties in searching and reviewing, papers published before rheumatology was established as a separate division were not included in this study. Figure 2A categorizes the total of 3,690 papers into basic and clinical fields based on their research areas and further analyzes them by impact factor (IF) with quartile (Q). Approximately one-third of the papers were classified into basic

fields, whereas approximately two-thirds were clinical research. For IF, the papers were ordered in the sequence of Q1, Q2, Q3, and Q4, with Q1 and Q2 accounting for more than 50% of the total. This indicates the impact of the published papers, which is encouraging. Relatively more papers were from basic fields within Q1. Over the years, the percentages of Q1 and Q2 journals increased, whereas the percentages of Q3 and Q4 journals decreased. The most frequent journal was *Rheumatology International*, similar to the previously discussed (Figure 2B) [5]. The *Korean Journal of Internal Medicine* and the *Journal of Korean Medical Science* ranked second and third, respectively.

We have reviewed our society's past and evaluated our current state. To achieve our mission of overcoming rheumatic diseases through top-tier research, education, and clinical care and thereby contribute to the improvement of public health and quality of life, we propose the following:

First, we must focus on increasing the number of rheumatologists and training the next generation of specialists to ensure the sustainability of rheumatology in Korea. Second, public awareness of rheumatology remains low. We must enhance our efforts to promote rheumatology to the public and media. Third, we should strengthen our interactions and collaborations with related fields, such as orthopedics, pediatric rheumatology, radiology, and rehabilitation medicine, to ensure high-quality research and clinical care. Fourth, research should encompass a wide variety of diseases, including common and rare conditions. Efforts should be made in both basic and clinical research to advance our understanding and treatment of rheumatic diseases. Finally, we urge all members to continue their efforts to advance KCR and rheumatology in Korea. We look forward to the KCR standing at the center of the international stage, leading the field of rheumatology worldwide.

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CONFLICT OF INTEREST

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AUTHOR CONTRIBUTIONS

JBj had full access to all of the data used in the study and takes responsibility for the integrity of the data, study supervision, and accuracy of its analysis. Concept and design: JBj; acquisition, analysis, or interpretation of data: JBj and BSK; drafting of the manuscript: JBj and BSK; critical revision of the manuscript for important intellectual content: JBj and BSK; statistical analysis: JBj and BSK; obtained funding: not applicable; administrative, technical, or material support: JBj; supervision: JBj.

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